

ABSTRACT

[0113] The present invention relates to compositions and methods for ablating tumor cells in a subject having at least one tumor site. More specifically, the method comprises contacting the tumor cells in at least one tumor with a lytic agent *in vivo*, under lytic conditions, forming a treated tumor; and applying a sufficient *in vivo* stimulus to the treated tumor forming a stimulated tumor. Compositions and methods are included for shrinking a local tumor or a distal metastatic tumor, or both in a subject. In a preferred embodiment, the method for shrinking a tumor in a subject comprises: contacting a stimulated tumor cells *in vivo* with a lytic agent. The stimulus directed toward the tumor cells is capable of increasing the level of chaperone proteins in the tumor cells. The combination of lytic agents and tumor cell stimulus leads to shrinkage of the tumors that were treated directly, wherein the stimulus is either applied simultaneously or sequentially. Moreover, distal or metastatic tumors that were not-treated directly are also decreased by introducing a lytic agents into a stimulated tumor cells in a first-tumor (“the treated tumor” or “the local tumor”). The preferred method steps that include introduction of a lytic agent and stimulation of the tumor cells is repeated in order to maximize the tumor shrinkage effects.